



AMERICAN SCHOOLS OF ORIENTAL RESEARCH

Essay on Overland Trade in the First Millennium B.C.

Author(s): A. Leo Oppenheim

Source: *Journal of Cuneiform Studies*, Vol. 21, Special Volume Honoring Professor Albrecht Goetze (1967), pp. 236-254

Published by: [The American Schools of Oriental Research](#)

Stable URL: <http://www.jstor.org/stable/1359373>

Accessed: 01/11/2014 08:47

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at
<http://www.jstor.org/page/info/about/policies/terms.jsp>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.



The American Schools of Oriental Research is collaborating with JSTOR to digitize, preserve and extend access to *Journal of Cuneiform Studies*.

<http://www.jstor.org>

ESSAY ON OVERLAND TRADE IN THE FIRST MILLENNIUM B.C.

A. LEO OPPENHEIM

University of Chicago, Chicago, Ill., U.S.A.

I. Introduction

Assyriologists know from experience that a publication or a study of a new type of cuneiform text is often followed by the “discovery” of similar tablets in museums or private collections. Such tablets escaped previous attention due to lack of interest, to failure to realize their specific importance, or, simply, to the superabundance of unpublished material stored in these institutions. This paper is intended to draw attention to a very rarely attested type of Neo-Babylonian economic document, and to demonstrate — it is hoped — the bearing of these texts on overland trade in the First Millennium B.C. and on the history of technology in the ancient Near East. At the same time it is an appeal to those in charge of the many thousands of unpublished tablets of the same genre and period to search — or to permit others to do so — for similar documents, and thus to help to elucidate a remarkable phase in the development of Mesopotamia’s relations with its neighbors to the East and the West.

The point of departure is two tablets from Uruk, YOS 6 168¹ and TCL 12 84. I became interested in

1. As if in answer to my wish for more tablets of the nature of the two texts discussed in this paper, Professor A. Sachs communicated to me, upon receipt of the manuscript, a tablet he had discovered several years ago in the collection of the Princeton Theological Seminary and identified as a duplicate to YOS 6 168. I give here the transliteration of PTS 2098 communicated to me by Professor Sachs and collated recently by Professor O. Neugebauer with my sincere thanks.

Obv. 10 GÚ.UN UD.KA.BAR šá K|UR

a-na 3 MA.NA ½ GÍN [

1 GÚ.UN 21 MA.NA ½ GÍN [Ú] *i[n-*

37 MA.NA AN.N[A

5 *a-na* 55 ½ GÍN

16 MA.NA 15 GÍN SÍG.ZA.GÍN.KUR.R[A

a-na 2 MA.NA ⅔ GÍN K[Ú].BABBAR

blank

PAP šá ^{md}UTU.NUMUN.DÙ

Rev. 4 (GÚ.UN) 55 MA.NA UD.KA.BAR

a-na 1½ MA.NA 8 GÍN šul-lul-tú 1 GÍN KÙ.BABBAR

55 MA.NA NA₄.ZA.GÍN

a-na ½ MA.NA 6 GÍN 2-ta ŠU^{II}.ME

5 2 (GÚ.UN) 33 MA.NA GADA tu-man

a-na 1 ⅙ MA.NA 2 GÍN KÙ.BABBAR

3 (GÚ.UN) 53 MA.NA NA₄ gab-ú šá KUR Mi-šir (above it written small:) gu-ra-bi ina IGI-šú

a-na 1 MA.NA 17 GÍN 2-ta ŠU^{II}.ME KÙ.BABBAR

32 MA.(NA) ⅓ GÍN Ú in-za-hu-re-e-tú

10 *a-na* ⅔ MA.NA 8½ GÍN KÙ.BABBAR

2 (GÚ.UN) 10 MA.NA AN.BAR šá KUR La-a-ma-na

a-na ½ MA.NA 2½ GÍN

4 (GÚ.UN) 17 MA.NA AN.BAR šá KUR La-ab-na-na

a-na ⅙ MA.NA 2 GÍN 2-ta ŠU^{II}.ME

15 3 (PI) 4 (BÁN) LÁL *a-na* ⅓ (MA.NA) 6 GÍN KÙ.BABBAR

20 DUK kan-da-a-nu šá GĒŠTIN.KÙ *a-na* 1 MA.NA KÙ.BABBAR

3 GÚ.UN ŠIM.HAB *a-na* ½ MA.NA KÙ.BABBAR

40 MA.NA ŠIM ha-as-hal-tu *a-na* ʾ2 [

1 GUR KI ta-tur-ru *a-na* [

20 2 GUR ŠIM.LI *a-*[

edge PAP šá ^mSUM.NA-[

traces

written small to the left of r. 13 ff.: 3 MA.NA 10 GÍN SÍG.ZA.GÍN.KUR.RA ir-bi šá ^mSUM.NA-ŠEŠ

Variants in numerals: lines r. 6 and r. 13 have ⅙ as against ⅔ in YOS 6 168: 10 and 18; line r. 20 has 2 as against 1 in YOS 6 168: 24;

in spellings, etc.: in PTS 2098 in^zahurētu has always the determinative Ú; r. 2 šul-lul-tú as against šal-šú in YOS

these documents because they are so similar with respect to the transactions recorded, the objects mentioned, and even the persons involved; they are dated 550 B.C. (YOS 6 168) and 551 B.C. (TCL 12 84), just one year and two days apart. This curious coincidence prompted the present investigation, which encompasses most of the regions of the ancient Near East and beyond, and has yielded a few insights as well as a number of problems hardly suspected until now.

II. *The Texts*

I begin with the translation of the longer text, YOS 6 168, which I give, for the convenience of the reader, in the form of a list.

600 minas of copper from Yamana at 3 minas 20 shekels of silver,
 81 minas 20 shekels of *inzaḥurētu*-dye at 2 minas 2 shekels,
 37 minas of tin at 55½ shekels of silver,
 16 minas 15 shekels of blue-purple wool . . . at 2 minas 40 shekels,
 all this: (blank) of Šamaš-zēra-ibni son of Nanā-iddin.

295 minas of copper from Yamana at 1 mina 38⅓ shekels,
 55 minas of lapis lazuli at 36⅔ shekels,
 153 minas of *ṭumānu*-fibers at 1 mina 42 shekels,
 233 minas of alum from Egypt at 1 mina 17⅔ shekels,
 32 minas 20 shekels of *inzaḥurētu*-dye at 48½ shekels,
 130 minas of iron from Yamana at 32½ shekels,
 257 minas of iron from Lebanon (*Labnanu*) at 42⅔ shekels,
 132 quarts of assorted honey at 26 shekels,
 20 jars of white wine at 1 mina,
 120 minas of *ḥūratu*-dye at 30 shekels,
 40 minas of *ḥaṣaltu*-spice(?) at 2 shekels,
 1 *kurru*-measure of *taturru*-spice(?) at 10 shekels,
 1 *kurru*-measure of juniper resin at 3 shekels,
 all this: (blank) of Nādin-aḫi.

(Date): Tašritu, 7th day, year 6 of Nabonidus, king of Babylon. 3 minas 10 shekels of the blue-purple wool are the “tithe” of Nādin-aḫi; 5 minas of the blue-purple wool and 40 minas of the iron are the “tithe” of Šamaš-zēra-ibni.

The second text, TCL 12 84, dated one year and two days before the first, closely follows, in the sequence of items and even in their individual quantities, the second part of the above list, i.e. the section characterized as the consignment of Nādin-aḫi. In fact, TCL 12 84 represents a consignment of the same gentleman, only differing from the earlier tablet in that it does not give the silver value of the entries.

295 minas of copper from Yamana,
 55 minas of lapis lazuli,
 153 minas of *ṭumānu* fibers,
 233 minas of alum from Egypt with their containers,²
 130 minas of iron from Yamana,
 257 minas of iron from Lebanon (*Labnanu*),
 37 minas of tin,
 8 boxes³ of copper (or: with copper reinforcements), whose contents have not been established,

6 168: 8; r. 15 LĀL as against LĀL.ḪI. A in YOS 6 168: 19; r. 18 *ḥa-as-ḥal-tu* as against *ḥas-ḥal-ti* in YOS 6 168: 22; r. 19 has KI before *ta-tur-ru* as against YOS 6 168: 23 which shows an erased sign before *ta-tur-ru*.

in wording: the adscript has *ir-bi* as against *ešrū* in YOS 6 168: 27; edge line 1 has no space between PAP and the personal name.

In spite of these differences there can be hardly any doubt that the undated tablet PTS 2098 is to be considered either a draft of the Yale text YOS 6 168, or a memorandum upon which the text of the latter was based.

2. For *gurābu* see CAD *gurābu* A and AHw *gurābu* II. For TCL 12 84: 13 see below, note 4.

3. The word *tak/q-p/bu* recurs in YOS 6 115: 3 as 1 *tak-bu* ša ŠIM. LI, i.e. filled with juniper resin, and therefore may denote a box-like container. Reading uncertain.

11 minas 20 shekels of blue-purple wool together with two dyed fabrics,⁴
 3 jars with *hūratu*-dye,
 126 minas of [...],⁵
 2 *šamallū*-jars with *inzaḥurētu*-dye.

The two linen fabrics dyed blue-purple are the "income" of Nādin-aḫi.

All this is the consignment of Nādin-aḫi, son of Innin-aḫa-ušur.

(Date): Tašritu, 5th day, year 5 of Nabonidus, king of Babylon.

In order to illustrate the nature and importance of these two documents, I offer the following statistics arranged according to the types of merchandise involved:

Merchandise	Amounts	
	in YOS 6 168	in TCL 12 84
1. Metals (for discussion see below, p. 240 ff.):		
Copper	600 minas and 295 minas	295 minas
Iron (<i>Yamana</i>)	130 minas	130 minas
Iron (<i>Labnanu</i>)	257 minas	257 minas
Tin	37 minas	37 minas
2. Chemicals (for discussion see below, p. 242 ff.):		
<i>inzaḥurētu</i> -dye	81 minas 20 shekels and 32 minas 20 shekels	2 <i>šamallū</i> jars
<i>hūratu</i> -dye	—	3 jars
alum (Egypt)	233 minas	233 minas
3. Foodstuffs (for discussion see below, p. 243 ff.):		
Wine (white)	20 jars	—
Honey (assorted)	132 quarts	—
<i>ḥaṣḥaltu</i>	40 minas	—
<i>taturru</i>	1 <i>kurru</i>	—
4. Fibers (for discussion see below, p. 244 ff.):		
Blue-purple wool	16 minas 15 shekels	11 minas 20 shekels ⁶
<i>ṭumānu</i> fiber	153 minas	153 minas
5. Miscellaneous:		
Lapis lazuli	55 minas	55 minas
Juniper resin	1 <i>kurru</i>	—
Packages	—	8 <i>takpu</i>

III. Discussion

I plan to investigate first the economic background for the business activities reflected in these two texts, then the provenience and nature of the merchandise dealt with, and, lastly, the people and the political situation behind the overland trade. These aims are quite likely too ambitious for the restricted evidence at my disposal, and pursuit of the investigation is bound to lead to conclusions that will undoubtedly be changed by the discovery of more documents of the same nature. Still, as long as we have no such additional material, we are — I like to think — duty-bound to follow up every clue the two texts might offer.

The parallelism between the two consignments of Nādin-aḫi (YOS 6 168: 7 ff. and TCL 12 84), which

4. The word GADA *naṣraptu*, recurring as *naṣrapātu ša ŠĪG.SAG* in BIN 1 9: 21, see also (in a damaged passage) CT 22 208: 11 (both NB let.), appears in a cultic context (*na-aṣ-rap-tū guḥaṣṣa*) in LKA 69: 13 = 70 i 10. It is to be differentiated from the "crucible" on the exta and the designation of a cut of meat (see von Soden, Or. NS 24 p. 143 n. 1). The damaged line 13 of TCL 12 84 can now be restored to *gu-ra-b[u ina IGI-šú]* according to PTS 2098. See note 1 PTS 2098 r. 7.

5. The Louvre tablet TCL 12 84 has a strange entry in line 14: 3 DUK *kan-da-a-nu šá ŠIM.ḪAB 2 (GŪ.UN) 6 M[A].NA [...]* of which only the first part (three *kandu* vessels with *hūratu*-dye) recurs in the Yale and Princeton texts. The second part either refers to an item of merchandise lost in the break or indicates the weight of the three containers.

6. The difference in quantities can perhaps be explained by the assumption that the "share" of the merchant was not included in the sum of 11 minas 20 shekels, while in YOS 6 168 the amount of 3 minas and 10 shekels had to be deducted from the 16 minas 15 shekels listed.

the chart above illustrates, cannot be considered accidental; on the contrary, the two texts must be interpreted as reflecting a typical situation. The parallelism strongly suggests that the merchant Nādin-aḫi was dealing with merchandise coming ultimately from the West — this is indicated by the geographical names Yamana, Egypt and Lebanon — on a recurrent, in fact on an annual basis, as the dates of the consignments suggest. Although both texts originate in the same city, there is no reason to assume that Uruk alone was in trade contact with the West to obtain essential metals, dyes, etc., and one may well conclude that similar consignments used to come to other cities of the Chaldean empire. Both texts should therefore be typical for the Mesopotamian trade that was concerned with the distribution of large-scale imports furnished by overland trade.

The obvious route for the transportation of large quantities (especially metals) or fragile goods (wine jars) is the Euphrates, on which boats have carried such merchandise downstream since time immemorial (but see note 92). The natural terminal for the river route is the capital, Babylon, from where the goods could be channeled to the provincial cities, such as Uruk, by some system of distribution. Whether it was due to the conditions of the overland route or the necessity of utilizing the seasonal flooding of the Euphrates for quicker and safer transportation, or on account of a customary trade pattern, an annual cycle for the deliveries seems to have developed. There remains the problem of the embarkation point on the Euphrates for the goods brought by caravan from the West. In the second millennium Emar⁷ had this role, but the embarkation point during our period cannot easily be determined. If I propose Carchemish it is mainly on account of its commercial importance in the Neo-Assyrian period when the “mina of Carchemish” was a standard accepted in the capital of the Assyrian empire.⁸

One might draw another conclusion from the two documents. In both, the compensation due to the merchants is mentioned at the end of each consignment. In TCL 12 84 we read “The two linen fabrics (dyed blue-purple) are the “income” (*irbu*) of PN,” while in YOS 6 168 the compensation is not called an “income,” but a “ten-percent share” (lit. “tithe,” i.e. *ešrū*): “3 minas 10 shekels of blue-purple wool are the ‘tithe’ of Nādin-aḫi,” and “5 minas of blue-purple wool (and) 40 minas of iron are the ‘tithe’ of Šamaš-zēra-ibni.” In spite of the designation “tithe,” the value of the compensation is much less than a ten-percent share.

This, however, is a small profit, with which traders could not possibly have been contented in view of the expenses and the risks of overland trade — especially trade with routes reaching from Egypt, the Mediterranean coast, and Asia Minor into Southern Babylon. We seem to have to deal with two kinds of trade in the situation we are studying: overland trade in which goods were moved by caravans and boats across long distances (by persons called in Greek *nauklēroi*), and the distribution of the imported merchandise throughout Babylonia by other merchants (in Greek: *emporoi*). Our two texts would then bear only on the second phase — in fact, only on a single instance of it, which we take to reflect the activities of a number of local distributors. These then received the goods from some central agency and sold them, most likely on a commission basis, with an additional bonus of less than ten percent of the total value of the consignment, payable in imports. Since the individual consignments entrusted to the agents are remarkably alike in content and value, it is reasonable to assume that our Nādin-aḫi, Šamaš-zēra-ibni, and others still unknown, formed partnerships, the preferred method of financing large-scale commercial activities in Mesopotamia. The goods brought into Babylonia by boat were bought with the silver contributions of the individual shareholders, and each participant received a standard assortment of metals, dyes, etc. as his share. Such a “share” is called *mēreštu* in TCL 12 84, while in YOS 6 168 the space where one expects this word is left empty in each of the two consignments. The meaning of *mēreštu* is difficult to establish on other than etymological grounds (literally, “what is demanded, needed”); still, certain passages in contemporary documents⁹ suggest that it refers to the silver (or the merchandise worth that amount) invested in a business venture.¹⁰

7. For the importance of the city, see W. W. Hallo, “The Road to Emar,” JCS 18 (1964), pp. 57–88. Note also the importance of Emar as a port of transshipment for barley, illustrated by the Mari letter ARMT 13 35 (see note 31).

8. Cf. e.g. ADD 230: 7 f., and passim.

9. In Nuzi texts, we read about wool (HSS 13 288: 9) or oil (HSS 15 257: 15) given out *ana mērešti* PN, i.e. to be available for a person’s use at his discretion.

10. Cf. GCCI 2 84: 1 (from Uruk): 7 GÍN KÙ.BABBAR *mī-ri[š-tu]* ša PN ... *ina muḫḫi* PN₂ *ana ḥarrāni*, also GCCI 1 409: 2. See also note 12.

Quite interesting in this connection is the Uruk tablet YOS 7 63, which seems to deal with still another aspect of the Neo-Babylonian import trade. Two persons receive 15 minas of silver from the exchequer of the goddesses Innin and Nanâ for what is called (lines 2-3) *ana mi-riš-tu ša Eber-nāri*,¹¹ "for merchandise (to be obtained) in Eber-nāri," i.e. in Syria, beyond the Euphrates. The obligation of the debtor is formulated as follows: *libbû mērešti ša ina Eber-nāri imahharūnimma ana Bābili ušakšadūnu* GEŠTIN KŪ LĀL KŪ UD.KA.BAR AN.BAR AN.NA SĪG.ZA.GĪN.KUR.RA *u hiši[ht]* ša Eanna ina Eanna inamdīnu, "in proportion to the consignment which they will receive in Upper Syria and will transport to Babylon, they will deliver to the temple Eanna (15 minas of silver's worth of) white wine, white honey, copper, iron, tin, blue-purple wool and other necessities for Eanna" (lines 5-9).¹²

We are here in the unusual position of having one type of business transaction illuminated from two sides: from the side of the temple, which provided the merchant with the capital he was to use to acquire certain types of merchandise in the West for delivery to the sanctuary (YOS 7 63), and from the side of the merchant (TCL 12 84 and YOS 6 168) through the list of the goods actually obtained. The text YOS 7 63 offers us another problem, inasmuch as the merchant had to travel to some trans-Euphratian emporium to acquire there from overland traders metals, purple-dyed wool, etc. brought by caravan from the West, and then to arrange for transportation to Babylon (not to Uruk). It remains uncertain whether the procurement of essential raw materials in this more direct way was restricted to the temple, while the transactions recorded in our two texts (TCL 12 84 and YOS 6 168) were due primarily to the merchants' initiative. Only additional material can elucidate this problem.

I would like to add parenthetically that partnership among merchants for investment purposes is not the only possible explanation for the existence of "shares." It is quite possible — as suggested by similar Greek practices¹³ — that the native merchants, in their desire to keep the price of imports down, avoided bidding against each other when the caravan arrived, formed a "company" which bought up all the merchandise, and then distributed it among its "shareholders."

Let me adduce another point in favor of the purely commercial and non-etatistic pattern proposed here for the overland trade of the first millennium B.C. In the second consignment of Nādin-ahi, recorded on TCL 12 84, appear as an atypical entry eight boxes (see note 2) "whose content has not been established." The boxes described as *ša siparri* are hardly made of, but rather reinforced with, copper; hence they are a sort of "strongbox" transported under lock and seal so as to protect their contents and keep them safe and secret. Such objects were certainly not the private property of the merchant Nādin-ahi, nor were they for sale. Apparently somebody was making use of a transportation and distribution system to send especially valuable objects overland to a specific destination. It seems likely that the carriers who brought merchandise into Babylonia from some point in Syria or even from the Mediterranean coast were considered trustworthy enough to be charged with the transportation of individually packaged items of undivulged content for delivery to their destination. In other words we have here the phenomenon, by no means unique, of a private merchant venture so well established and accredited as to be (under certain circumstances) used for what we would today call the transportation of overland mail. Moreover, we seem to be dealing with an institution of long standing in Mesopotamian contacts with the outside world — an institution which had some official status or was, at least, connected with high court officials, because such international contacts were not likely to exist on a purely private level. See below, p. 253, for a suggestion.

At this point, I turn to the investigation of the merchandise itself in order to establish, on the basis of the scant indications in our two documents, the geographical extent of the trade relations as well as their technological implications.

1. Metals

Metals (to be exact, copper, iron, and tin) form the largest items of the three consignments, and the

11. For this expression see Weidner AfO 8 (1932-33), p. 33 n. 1, and CAD *eber nāri* mng. 2.

12. For another passage see GCCI 2 111: 5, speaking of one mina of silver's worth of the spice *kasû* which two persons have to deliver to Eanna (from whose exchequer they had received the money needed to buy it), "according to the legal document (stipulating) the consignment" (*kî pi u'ilti mēreštu*).

13. Cf. F. M. Heichelheim, *An Ancient Economic History* (Engl. edition, Leiden 1964) Vol. 2, p. 69.

importance of these same metals in our trade is also borne out by the tablet YOS 7 63 discussed above. Šamaš-zēra-ibni imports 600 pounds of copper and 37 pounds of tin, while Nādin-aḫi has two consignments, each of 682 pounds, consisting of 295 pounds of copper and 387 pounds of iron. The identification of the metals poses no problem once one realizes that *siparru* (wr. UD.KA.BAR) stands for copper and not for bronze. The latter as a raw material is never the object of commercial transactions in the ancient Near East, because it was typically prepared on the spot from copper and tin by the manufacturer of bronze objects. The very mention of tin beside "bronze" in our consignments (and in YOS 7 63) bears out this interpretation. It is further corroborated by the fact that the *siparru* comes either from Cyprus (the "Copper Island" known as Alašia in the Mari and Amarna periods¹⁴), a well-known supplier of copper, or from any other locality in western Asia Minor colonized by Greeks (the *Yam(a)na(j)*), as they are called in cuneiform texts since Sargon II).^{14a}

The iron comes from two sources which are differentiated most probably on the basis of the quality of the metal. The "Greek" iron was certainly brought from some region on the islands or the western coast of Asia Minor, while that said to come from Lebanon should perhaps be considered native Syrian iron (for another source of iron in our period, Cilicia, see below). However, these geographical terms may refer either to specific qualities of the metal or to the actual provenience of the ore. We have to keep in mind that from the beginning of the first millennium B.C. the West was the main source for the iron used by the Assyrian war machine. Iron belongs to the typical and most sought-for booty taken by Assyrian kings from the regions of Upper Syria, especially from Damascus, evidently a center of the iron trade in the period. That city once yielded the enormous amount of 30,000 pounds of iron to Adad-nīrārī III (810-783 B.C.).¹⁵ This state of affairs has been documented by the Russian Assyriologist N. B. Iankovskaia with extensive statistics conveniently summarized by M. N. van Loon in his *Uartian Art, Its Distinctive Traits in the Light of New Excavations* (Istanbul, 1966), p. 81 and n. 11. Our two documents from the sixth century show that the Syrian export trade in iron was still going strong; most likely it was in evidence from the beginning of the industrial use of iron, and was conducted by the two age-old methods of moving luxury goods or essential commodities across boundaries: booty and trade (see below, p. 246).

The import of western iron into Babylonia is also attested in other documents of the Chaldean period. In 1950, in a footnote in Pritchard (ed.) *ANET*, p. 305 (note 2), I drew attention to a country named Ḫumē which had been unrecognized (see Weidner, *Mélanges* . . . Dussaud 2, 935) and showed it as a source for iron. The identification of Ḫumē as a variant writing for Quṣe, the Assyrian and Hebrew name for Cilicia,¹⁶ was then ingeniously proposed by W. F. Albright in his article "Cilicia and Babylonia Under the Chaldaean Kings," *BASOR* 120 (1950), pp. 22-25. The passages to which I drew attention come from an unusual two-column administrative tablet from Sippar (Nbn. 571) and from two Uruk documents. On the reverse of Nbn. 571 are listed large amounts of iron, from 1800 minas down (line 31 a) — with the names of the officials in charge and the dates of the transactions (all from the first eleven years of Nabonidus, i.e. from 555 to 545 B.C.) — among which is also "iron from the country Ḫumē" in lines 35b (15 minas), 37a (18 minas and 54 shekels), 40a (14 minas 50 shekels) and 45a (amount broken). In all instances, this iron is said to be brought "from the warehouse" (TA É.ŠU²). This in itself, and the small quantities listed, might indicate that this iron was of higher value. The Uruk texts are uninteresting; YOS 6 210: 14 is a damaged administrative tablet, and GCCI 2 53 records that Ḫumē iron was given to the smith to make *kammu*(!) tools.

Still another country is mentioned as a source of iron in an Uruk document. In GCCI 1 9: 2, an "iron-smith" (*nappāḫ parzilli*) is given 25 minas of iron of KUR *Ši-im-mir*. The same geographical name recurs repeatedly as the source of imported wine, as in the Grotfend cylinder of Nebuchadnezzar II where

14. For Mari see G. Dossin in *Syria* 20 (1939), 111; for the Amarna Letters, EA 34-36, 40; and for the Boghazkeui material, H. G. Güterbock, "The Hittite Conquest of Cyprus Reconsidered," *JNES* 26 (1967), pp. 73-81.

14a. For the problems connected with the designation of the Greek in general or the Eastern Greek as Yamana, I can refer here only to E. F. Weidner in *Mélanges Dussaud* 932ff., and, for the background, to J. Boardman *The Greeks Overseas* (Pelican Book A 581A, 1964) index s. v.

15. See Luckenbill, *Ancient Records of Assyria and Babylonia*, Vol. 1 §740.

16. This region was already producing iron in the second millennium; cf. A. Goetze, *Kizzuwatna and the Problem of Hittite Geography* (New Haven, 1940), especially p. 27 ff.

we have to read in i 23 (VAB 4 p. 90) KUR *Ši-im-mi-ir(!)* and, with the same correction, in the Wadi Brissa inscription VAB 4 154 A iv 51; see also Nbn. 1005: 6 f. mentioning 3 *kandu*-jars with wine from KUR *Ši-mi-ri*. Since most of the wine-producing countries (see below, p. 244, for a list) can be located in the Euphrates valley and the piedmont hills of the Zagros range, the historical geographers now have two clues — apart from the name — for any proposed identification of *Šimir*: iron and wine.

With tin, we are in our usual quandary. During most of the second millennium this material, so essential for the making of bronze, seems to have come into Mesopotamia from Iranian mines through the Diyala river valley and other mountain passes. As far as I know, the few first-millennium documents studied here represent the only evidence for tin trade in the first millennium. It is certainly not an accident that the booty taken from *Ḫanigalbat* (in Upper Mesopotamia), *Suḫi* (on the Euphrates), *Ḫattina* (upper Syria) and *Amida* (today's Diarbekr) by Tukulti-Ninurta II (890-884 B.C.), and subsequently Aššurnasirpal II (883-859 B.C.) and Shalmaneser III (858-824 B.C.) traces, so to speak, the "tin route" of the first millennium along the Euphrates kingdoms upstream into the mountains of Armenia, though this does not necessarily elucidate the ultimate provenience of the metal.¹⁷

2. Chemicals

The most important entries in this group are the dyes, in spite of the fact that alum forms the largest item. The terms for the dyes are most likely not Akkadian: *inzaḫurētu*¹⁸ and *ḫūratu* (or read possibly *pagratu*).¹⁹ Both begin to make their appearance in Middle Assyrian and in texts from Nuzi, and could therefore belong to a dyeing technology alien to the practices of the Mesopotamian textile industry. In the texts of the Chaldean period, these words are often used to qualify certain hues of purple. We know of *tabarru* purple²⁰ which is characterized as *ša ḫūratu*,²¹ and GAN.ME.DA purple²² as *ša inzaḫurēti* and also as *ša ḫūratu*.²³ This nomenclature indicates quite probably specific shades of purple²⁴ which were achieved through the application of the specific dyestuffs mentioned; hence the terms probably describe such shades of purple color as are normally obtained by means of the dyes called *ḫūratu* and *inzaḫurētu*. Since reddish and bluish tints were always in special demand by lovers of purple-dyed wool, I propose that these designations refer to such vegetable dyes as were available in Mesopotamia and capable of producing such colors. While many native plants²⁵ can be used to produce yellow, brown and especially red shades, woad (*Isatis tinctoria*) does not seem to be among them. Since the fermented leaves of that plant yield a strong indigo-blue dye, the foreign term *inzaḫurētu* might refer to woad which had to be imported. The plant and its utilization would then belong to the technological achievements char-

17. For a tin mine east of Urartu, see R. J. Forbes, *Metallurgy in Antiquity* (Leiden, 1950), p. 238 and note 29.

18. The foreign origin of the word is evident in the numerous spelling variants such as *inzurātu*, *inzuḫirētu*, *inzurētu*, *inzaḫrētu*, *inzaḫurātu*, *inšaḫurētu*; note also the group of words of kindred phonetic structure: *ḫenzūru*, *ḫinzūru*, *inzūru*, *ḫinziribu*, *ḫinzirubu*, *ḫizzaribu*, *inzarū*, *inzuruḫu*, all denoting plant products, dyes and color shades.

19. This plant alone is listed in Hh. III 495 (as *giš.lagab*) after a section dealing with roots. With the determinative *ú* and the reading *háb* (i.e. LAGABxU) a vegetal dye used for tanning is quite frequent in Ur III texts, cf. UET 3 Index p. 177b sub *ú.pú*. Note in this context the late commentary passage ŠIM.ḪAB = *in-za-ru-ú* listed CAD sub *inzarū* in lex. section.

20. For the Hurrian origin of this term for a dark shade of purple in Nuzi and later, cf. Goetze, JCS 10 (1956) 35; see also Dietrich and Loretz, WO 3 (1966), 230.

21. Cf. UCP 9 p. 85 No. 12: 5.

22. Cf. GCCI 2 105: 3f., 121: 2 and 7, YOS 7 183: 4, 24, 27 and 32, Oberhuber, *Keilschriftdenkmäler . . . zu Florenz*, No. 165: 7'.

23. *ti-mu šá SÍG*. GAN.ME.DA *ša GIŠ*.LAGAB in GCCI 2 108: 4, 365: 9 f., YOS 7 183: 10 and 30.

24. It is outside the scope of this essay to deal with the complex nomenclature of purple, even within the administrative documents of the sanctuaries in the Neo-Babylonian period. For an investigation dealing with second millennium texts from the West, the reader is referred to M. Dietrich and O. Loretz, "Die Bezeichnung für Purpurrot in den akk. Texten von Ugarit," WO 3 (1966), pp. 228-232, as part of a paper titled "Die Verträge zwischen Šuppiluliuma und Niqmandu," *ibid.* pp. 206 ff.

25. Of course, many of the plants mentioned in medical texts, in administrative documents and, above all, in the scholarly word lists (whether compiled for philological or medical purposes), are bound to be plants used for dyeing textiles, leather, wood, etc. Here we would need the help of the paleobotanist to learn what seeds of dye-yielding plants are found in Mesopotamian soil.

acteristic of the Hurrian civilization. The case for the use of *hūratu* (which, according to our two texts, was likewise imported) for tanning and dyeing as early as the Ur III and Old Babylonian periods (see above, note 19) is more complicated.

The suggestion offered here concerning woad can be supported by the fact that in our texts *inzahurētu* is both weighed — hence a dry matter, and handled in containers — hence a liquid, thus probably a dye made of woad. The use of alum points in the same direction, since it is indispensable as a mordant for dyeing wool with the mentioned plant.

Alum comes, of course, from Egypt, as does the natron with which it is listed in large quantities in the letter ABL 347 discussed below (pp. 246 and 248) in some detail.²⁶ The fact that the rituals KAR 60 (= RAcc. p. 20 ff.) r. 7 and RAcc. 14 ii 24 refer to alum from Syria (*ša māt Ḫatti*) shows only that, long before our period, Syria was already acting as middleman in Mesopotamian-Egyptian trade contacts. Egyptian alum is also listed in the Uruk text GCCI 1 327: 2 f.²⁷ beside *hūratu*, likewise in CT 22 98: 21, Cyr. 190: 7 f.; in Camb. 155: 1 ff. we find both chemicals, along with oil, issued for tanning.

Although listed on p. 238 under "Miscellaneous," the first item (YOS 6 178: 9) should be discussed among the "Chemicals." It mentions 55 minas of NA₄.ZA.GĪN, not to be translated by "lapis lazuli" for two reasons: first on account of its low price (36 $\frac{2}{3}$ shekels of silver), and secondly because, throughout the entire history of Mesopotamia, lapis lazuli was consistently brought from the Northeast,²⁸ passing from hand to hand through Iran and the Zagros mountains into Mesopotamia. We therefore have to assume that NA₄.ZA.GĪN denotes here either a blue glass produced cheaply somewhere in Syria, or a blue copper compound imported for use in making blue paint (possibly for mural decoration), or even that frit-like material, called in classical texts "Egyptian Blue," which is well attested in a number of beautiful objects appearing all over the ancient Near East in the first millennium.²⁹

3. Foodstuffs

When concerned with foodstuffs, overland imports must consist either of essential staples handled on a large scale, or of luxuries. The former case is rarely attested for Mesopotamia except for the Išbi-Irra — Ibši-Sin episode³⁰ and the unique Mari letter, M. Birot ARMT 13 35³¹, which illustrates the practice of supporting the population of the kingdom of Mari by means of large-scale barley imports down the Euphrates river. Our texts deal partly with foodstuffs that seem to be luxuries — such as wine — and partly with honey, spices(?) and cheap condiments belonging to the amenities of civilized living. We are at a loss to identify the nature of the condiments called *ḫašaltu* and *taturru*, imported in quantity by the merchant Nādin-aḫi. The former, which is weighed, is elsewhere attested only as a word for foliage³² and might possibly denote cheap aromatic leaves (used perhaps to sweeten water or the like). The same seems to be true for *taturru*³³ which is listed in a measure of capacity and attested only here. In the same category, i.e. the one which comprises unessential but apparently indispensable commodities that lift life, however little, above the subsistence level, fall the 180 quarts of juniper resin (ŠIM. LI = *burāšu*, see CAD s.v.) belonging to the same shipment. This resin was used in Mesopotamia for many purposes, such as fumigation, the perfuming of salves, washing of laundry, etc., and appears there in many forms

26. The ritual KAR 198 (= Köcher BAM 222) mentions likewise in line 9 two shekels each of *niṭ-ru* (instead of *niṭiru*) beside NA₄ *gabē*, i.e. natron and alum.

27. Alum explicitly qualified as Egyptian occurs, furthermore, in the Neo-Babylonian texts YOS 3 20: 19 (Uruk), Nbn. 751: 7 f., and the perhaps incomplete list GCCI 2 358 (Uruk) where we find it beside *inzahurēti*, various spices, bitumen, and AN.BAR šá KUR [sic] (line 8). The Uruk tablet YOS 3 14 contains a curious reference to alum from a country (KUR) called Kašappu, which should be connected with the town (URU) appearing in the Neo-Assyrian letter ABL 852: 3 and 5 as *Ka-šap-pi*.

28. In the introductory chapter of my book *Glass and Glassmaking in Ancient Mesopotamia* (in press) I have dealt at length with the role of this stone in Mesopotamian literature, its provenience and its imitations in opaque glass.

29. For examples, see F. R. Matson, "Egyptian Blue," in E. F. Schmidt, *Persepolis II* (Chicago, 1957), pp. 133–135; also M. N. van Loon, "A Lion Bowl from Hasanlu," in *Expedition 4* (1962), pp. 14–19.

30. See S. N. Kramer, *The Sumerians* (Chicago, 1963), p. 70 f.

31. See also my *Letters from Mesopotamia*, no. 37.

32. See CAD sub *ḫašallatu* and AHw. sub *ḫaš/šhaltu*.

33. I think that we have to keep *taturru* separate from the plant name SUM.ŠIR.DILLI = *tatturrá*, Hh. VI 135.

(weighed and measured in units of capacity). The prices given elsewhere³⁴ are quite high when compared with the silver value indicated in our text. Since none of these commodities is included in the other consignments (but see note 4), one could suggest that their importation was normally in the hands of specialized merchants whose clientèle was different from the one that bought copper and tin to make bronze objects, iron for agricultural and industrial necessities — and purple-dyed wool to decorate expensive pieces of apparel, mainly for the wardrobe of the gods. In other words, the mentioned commodities might have been destined for a type of trade in which they would be sold by peddlers³⁵ at high prices to individuals, small households, etc. As to the problem of the provenience of this kind of merchandise, we can only suggest that it was gathered by natives along the Euphrates river and the hills to the northwest of Mesopotamia, and brought to the point of transshipment where the goods coming by caravans across the desert were loaded on boats. We thus might have in the consignment of Nādin-aḫi two types of merchandise: one that originated in the West, and another coming from Upper Mesopotamia and adjacent regions.

Honey and wine also belong to the latter category. Apiculture was always rather underdeveloped in Mesopotamia, and honey was imported³⁶ from the mountains which produced the “white” honey much in demand³⁷ in the plain. As to wine, it is well known that though grapes were grown here and there in the South — mainly, it seems, as a sweet fruit easily preserved in dried form — good wine had to be imported from the hills of Upper Mesopotamia since the time of the Ur III period.³⁸ The evidence is too abundant even to be surveyed in this context. I shall restrict myself to pointing out the countries and regions from which, in the Neo-Babylonian period, wine was imported, though it is not always possible to locate them: Suḫi on the middle Euphrates, VAB 4 90 i 24, 154 i 23, and YOS 3 138: 7 f.; Izallu (Azallu) to the northwest of Assyria, VAB 4 90 i 22, 154 iv 50, and GCCI 1 225: 2, TCL 9 105: 11 and also RAcc. p. 75: 11³⁹; Arnabānu, VAB 4 90 i 24, 154 iv 42, and GCCI 1 225: 4; māṭ or āl Bītāti, VAB 4 90 i 25, 154 iv 54, and GCCI 1 225: 3; for the country Šim(m)ir(i) see above, p. 241, and see for the countries which appear only in the inscriptions of Nebuchadnezzar II VAB 4 index sub Ḫilbunu, Tuṣimmu, Bīt-Kubātim and “Opis.”

4. *Fibers*

The two most interesting items in our texts are the approximately 14 minas of blue-purple⁴¹ wool and the 153 minas of a fiber called GADA *ṭumānu*, i.e. linen *ṭumānu*.

The importation of both wool and linen from the West into Mesopotamia represents a new facet in the history of the trade of our region, and therefore deserves some attention.

Mesopotamia knew from its prehistoric period two principal types of fibers for textiles: animal fibers, yielded by sheep and goats, and plant fibers, provided mainly by flax. The wool of the typically white sheep⁴² was always foremost in importance for everyday as well as luxury uses, while the black hair of

34. See B. Meissner, *Warenpreise in Babylonien* (Abhandl. Pr. Ak. d. Wiss., 1936), p. 12 and note. For the Ur III period, J. B. Curtis and W. W. Hallo, “Money and Merchants in Ur III,” *HUCA* 30 (1959), p. 120.

35. Such persons are called *ša tābtīšu* “He-with-the-salt,” *ša našīšu* “He-with-the-našū-beer,” *ša gaššātešu* “He-with-the-kindling-wood,” etc. The comparison with Hebr. *rōkkel* and Greek *kapēlos* should only be mentioned in passing; it raises too many problems to be discussed here.

36. For the Ur III period see Curtis and Hallo, op. cit., p. 128. For an identification proposal for this country see A. Millard, “Ezekiel XXVII: 19, the Wine Trade of Damascus,” *JSS* 7 (1962), pp. 201–203.

37. Cf. the entry LĀL.MEŠ KUR-e BABBAR-ū in the “Practical Vocabulary Assur,” *AfO* 18 (1957–58), p. 329: 114, and CAD sub *dišpu*, especially usage f.

38. See again Curtis and Hallo, op. cit., p. 127.

39. For “stones *ša* KUR *I-zal-li*” see ABL 644: 5, also CAD sub *kapāru*.

41. The corresponding Akkadian term is *uqnātu* (see Dietrich and Loretz, op. cit., p. 231) which appears, so far unrecognized, in Neo-Babylonian documents as *qunātu* (a spelling for **qnātu*). Cf. SĪG *ta-bar-ri* SĪG *qu-na-a-tu*₄ BE 8/1 154: 3, SĪG.ḪI.A *ta-bar-ri qu-na-a-tu* Nbk. 457: 7, *qu-un-^{ne}(?)e-ti* *ša šundu* (beside *gam-mi-da-a-ti* *ša šundu*) GCCI 2 361: 4. It seems therefore that Assyriology would not have had to wait for the spelling of the word in Ugaritic texts in order to establish the reading *uqnātu*.

42. In the Neo-Babylonian texts, sheep and goats are referred to respectively as *pešū* “white” and *šalmu* “black.” See CAD *šalmu* adj. mng. 1a–2'. For exceptional instances of black wool garments, see *ibid.* mng. 1b.

the goat was destined for rough covers, supposed to withstand hard use, and for ropes. The bast of the flax plant yielded a finer and whiter fiber than wool, but linen in Mesopotamia seems to have been reserved for small pieces of apparel, typically underwear worn next to the body. As main pieces of apparel, linen appears to have characterized the wearer as belonging to special classes of priests⁴³ or as rich and important. The great number of references in cuneiform texts to the raising of sheep and goats, their plucking and shearing, the manufacture of the fibers into yarn, the weaving of fabrics, and the eventual role of these textiles in daily life, cult, economy and trade, show how prominent a position wool occupied in Mesopotamian civilization. There can hardly be any doubt that it represents the dominant fiber, comparable only to linen in Egypt. This becomes especially clear in view of the paucity of the documentary evidence concerning the growing of flax and the processing of its fibers. One gains the impression either that *Linum humile* did not thrive too well owing to weather, water, or soil conditions in Mesopotamia (note, however, below, p. 251), or that it was planted for its oleiferous seeds rather than for the fineness of its fibers. This consideration is suggested by the observations of the Danish paleobotanist H. Helbaek in "The Plant Remains," his contribution to M. E. L. Mallowan, *Nimrud and its Remains* (London, 1966), Vol. 2 pp. 613–620, especially 616 f., concerning the absence of sesame seeds in Mesopotamian soil. It is therefore possible that linseed (mentioned as *zēr kitī* in medical texts) was called *šamaššammu* and that this designation was in the first millennium A.D. transferred to *Sesame indicum*.

In the first millennium B.C. one can observe a growing interest in foreign linen and linen garments exhibited by Babylonians and Assyrians alike, which we will discuss presently. It is illustrated by the unfortunately damaged reference to Egyptian linen in the Dog River Stela of Esarhaddon,⁴⁴ the casual mention of Egyptian linen in a Neo-Babylonian temple account (see below, p. 250), and the role played by the fiber called *būšu* (see below, p. 249).

This digression on Mesopotamian fibers should not leave unmentioned two more fibers of vegetal origin. Sennacherib (704–681 B.C.) boasts in one of his inscriptions (OIP 2 116 viii 64) of the variety of plants in his "botanical garden," and mentions on that occasion "the trees bearing wool" which, as he says, "people pluck and weave into clothing." Though this strange tree, famous for its wool-bearing fruit, was grown in the royal garden for the king's pleasure, the utilization of the fine white fibers seems to have been widely known, as the cited wording suggests. Cotton fabrics, however, if made and used in Mesopotamia, may have been referred to with designations still lost among the many unidentified technical terms used in our period to denote fabrics. The other vegetal fiber⁴⁵ worthy of mention is produced from papyrus-like sedges or similar materials. We know of *niāru*, "papyrus paper," imported in rolls (*kirku*) from the West for the use of the scribes of Assyria when writing Aramaic (ABL 568 r. 19, and see below, p. 249, for this letter), while from a curse in the treaty between Aššur-nīrārī V (754–745 B.C.) and Matī-īlu we learn of persons so destitute as to wear garments made of *niāru*.⁴⁶ Similar practices are known from Egypt and, more important, from the Babylonian Talmud.⁴⁷

43. See CAD sub *gadalallū* for the person, *gadalū* and *gadamāhu* for the garment. Note also the Seleucid ritual published by A. Falkenstein, UVB 15 (1959), p. 40 ff. No. 2. Besides listing more linen garments than any other text of this type, the document makes a statement quite rare in cuneiform texts in line 10': *kalū gullubu lubār kitī ḫalpu* "the ordained *kalū*-exorcist clad in a linen garment" (l. 10'), while the not-ordained *kalū* is clad in a (woollen) garment called *šibtu* as is said in line 12': *kalū la gullubu MĀŠ(!) ḫalip*.

44. The passage has TUG *sad-din bu-u-ši* [. . .] *ša kīma ba ad la ad x* [. . .] and clearly contains a description of the fineness of *būšu*-linen illustrated by a comparison, in Borger Esarh. p. 101 §67: 21 f.; cf. for a reading attempt my translation in ANET² 293. For *saddinnu* see below, p. 249.

45. A word concerning hemp (*Cannabis sativa*) is in order here. Though hemp is said to have been known in the ancient Near East (see below), and V. Scheil apparently discovered the word for it (Akk. *gunnabu*, in RA 18 (1921), p. 97, also B. Meissner, AfO 8 (1932–1933), p. 225), Professor H. Helbaek, The Danish National Museum, Copenhagen, informs me that no hemp seeds were ever found in Mesopotamia, Iran, Anatolia, or Egypt. Cf. now also H. Godwin, "The Ancient Cultivation of Hemp," *Antiquity* 41 (1967), pp. 42–49, where the reference to Forbes Studies in Technology Vol. 4, p. 59 and note 500, cannot serve as a proof for the cultivation of hemp in Mesopotamia since the translation of *azallu* as hemp is not acceptable (see CAD A/2 s.v.).

46. The text, AfO 8 (1932–1933), 20 r. iv 15, runs: *niāru ana lubuštīšunu liššakin*.

47. For Egypt, cf. A. Lucas, op. cit., p. 149 f.; for the Talmud, S. Krauss, *Talmudische Archäologie* (Leipzig, 1910), I, 141 f. and note 171 on p. 544. Note, for Mesopotamia, also the word *urbannu* "papyrus" (Klauber PRT 26: 3, 8 and r. 8, see Landsberger OLZ 1914 265) which is to be connected with *urbatu* denoting papyrus rafts or boats (3 R 7 ii

The relatively small quantities of blue-purple wool and of fabric of the same color (see note 3) represent so far the only direct evidence we have from the Neo-Babylonian period for the importation of wool from the West. From the earlier, Assyrian, archives, however, we get a different impression because the "commercial" letter ABL 347 already mentioned (see above, p. 243) lists, among other fibers to which I will return presently (see below, p. 248), the large amounts of 4,800 pounds of red-purple wool and 420 pounds of dark purple wool.⁴⁸ This discrepancy, of course, might be due to accidents in the preservation.⁴⁹

Along with the commercial importation of these coveted products of the West occurs what Professor Diakonoff calls⁵⁰ the "forcible exchange of goods" between Assyria and the West. Both types of transactions — trade and booty — to which I have made reference above (p. 241) are concerned with the same commodities. Purple-dyed wool as tribute or booty appears rather rarely in the extant texts. The administrative Neo-Assyrian tablet from Guzana, Halaf No. 62, mentions rather small quantities of such wool⁵¹ in several hues, and the very damaged NA letter ABL 1283 which deals with Babylonian affairs mentions as *mandattu*, "tribute," not only *argamannu* and *takiltu* wool but also ivory. Wool and ivory certainly came from the West; their delivery as tribute paid by Babylonian rulers is amply attested in the Assyrian annals of the period.

It is notable that the Assyrians when demanding tribute or taking booty were clearly more interested in obtaining garments than raw materials. In fact, the royal inscriptions never mention purple-dyed wool, but solely *lubulti birmi u kitê*, i.e. "garments made of linen with multicolored decoration."⁵² All the conquered or threatened kingdoms from Carchemish to the Mediterranean coast had to deliver large quantities of such apparel to the Assyrian kings who distributed these obviously very fashionable "Western-style" garments among their officials, as is illustrated by a well-known letter from Sennacherib as crown prince to his father, ABL 568.⁵³

We owe evidence for an actual and intensive trade in such garments to the prophet Ezekiel who, in his prophecy against Tyre (xxvii 24), says, "They were the merchants of all sorts of things, in coats of *takiltu* purple and *riqmāh*-work." It seems to me that it might have been this type of work, i.e. the work done by the Western craftsmen called *rōqem*,⁵⁴ which, in its gay-colored, perhaps folkloristic decorativeness, appealed to the staid Mesopotamians accustomed to monochrome wool and linen apparel. This new and quite characteristic western textile technique, which seems to have combined linen with multicolored embroidered⁵⁵ or — perhaps — woven-in decoration, is very much in evidence in the cuneiform texts

77, Shalmaneser III) as well as a plant (Diri IV 12 wr. $\dot{U}\dot{Z}_1^1$.NIGÍN) and a garment, obviously made of vegetal fiber: TUG. $\dot{Z}_1^1$.NIGÍN = *lu-bu-uš-tú* Erimbuš VI 44.

48. The two entries are written atypically: SÍG.SA₅ KUR line rev. 6, and MI KUR r. 7.

49. Note that the Uruk letter BIN 1 4: 10 mentions *argamannu*-wool at a price far higher than that in our texts. The letter deals evidently not with importation but with the distribution of import goods. It mentions *inzahurêtu* dye at a price roughly comparable to that in our texts (one mina at 1½ shekels) and adds cedar (*erēnu*) which is cheap and in a large quantity, hence either resin or wood shavings.

50. See the forthcoming volume of the Proceedings of the Third International Congress for the History of Economy, Munich 1965.

51. Interestingly, this text yields the designation *urtû* (probably referring to the "West" — see CAD sub *amurrû*) which appears only here outside of scholarly texts. See Goetze JCS 10 (1956), p. 34 and note 21.

52. See CAD sub *birmu* A, especially usage g. The nature of these garments, their specific decorations and features (pattern, color, and arrangement on the fabric) remains still very much in the dark. One must wait till an interested art historian makes a study of garments represented in the iconography of the period to obtain some clarity. See note 55.

53. This letter (previously published as ADD 810) is extensively treated by W. J. Martin, *Tribut und Tributeleistungen bei den Assyriern* (= St. Or. 8/1 (1936)), p. 40 ff. For the practice of distributing garments from tribute (or booty) among high officials of the realm, see also the Šuppiluliuma-Niqmadu treaty MRS 9 p. 40 f. RS 12.227, the similar text *ibid.* 47 f. RS 11.732, and the Muršili-Niqmepa treaty *ibid.* 80 f. RS 17.832+ which often mention as a unit a linen garment (wr. TUG.GADA) and the amount of purple wool used to decorate it, usually one hundred shekels. See above for further discussion, and below, notes 55 and 56.

54. His Mesopotamian counterpart could have been the *išpar birmi* (see CAD s.v.). As a matter of fact the Akk. verb *barāmu* corresponds in many of its nuances exactly to Hebrew *raqām* and its derivatives.

55. An actual piece of linen, showing a blue thread somehow incorporated (embroidered or woven) into the fabric, was found in the Jordan valley; see G. M. Crowfoot, "Linen Textiles from the Cave of Ain Feshkha in the Jordan Valley," *Palestine Exploration Quarterly* 83 (1951), pp. 5-31, especially p. 9 ff. It is noteworthy in view of note 60 below that the basic fabric as well as the indigo-dyed decorative thread is in this case of flax.

of our period.⁵⁶ It seems to have been applied whenever linen thread and purple wool of various hues are given simultaneously to weavers to be made into pieces of apparel typically to be placed on the image of the deity at certain cultic occasions. These garments may well have been made of linen and provided with appropriate decorations in colored wool threads whose design referred in some way to the specific nature of the cultic event celebrated. The importance of that peculiar technique⁵⁷ of combining linen with colored wool⁵⁸ is tellingly borne out in the Old Testament by the exclusive use of such fabrics for the tabernacle and the elaborate apparel of the high priest⁵⁹ in Jerusalem.⁶⁰

My investigation now turns to the fiber called *ṭumānu*, a word always written with the determinative GADA. When we search the contemporary texts for evidence of the uses of the considerable amount — 153 pounds — of that fiber apparently brought every year into Uruk, we discover the following. According to the tablet Moore Michigan Collection No. 7 (wr. 528 B.C.), a weaver received (*našû*) half a pound of *ṭumānu* and ten shekels of blue-purple wool to manufacture the appropriate piece of apparel for the *lubuštu*-ceremony, the clothing ritual of the first of Tammuz. The text is dated three days earlier, from which one may well infer that he had to make only a small piece of apparel (see below, note 62). In UCP 9 p. 62 No. 20 (dated 593 B.C.), we have a similar document which is, however, badly preserved. Again, a weaver received two entries of *ṭumānu* (one of ten shekels, the other is broken) for an item destined for the same ceremony in the month Ulûlu. The largest document, also from Uruk, is GCCI I 388, written in 553 B.C. Though it differs somewhat in structure, it likewise records the utilization of *ṭumānu* fibers in combination with colored wool for holy vestments. The tablet is divided into several sections, of which only the first three⁶¹ are of immediate importance. In each of these sections is recorded the distribution of *ṭumānu* for *lubuštu* ceremonies⁶² which are scheduled once or twice a month, and in each section the *ṭumānu* is said to go to three agencies of the temple: to the weavers who receive the largest amounts (from 2 to 3½ minas), to the “workshop” (*bīt dullu*), and to the storehouse (É.GURU₇.MEŠ). The last two receive only small amounts, between 14 and 40 shekels each.

The evidence just presented seems to point to the interpretation of *ṭumānu* as a type of linen, used like the linen called *kitû*. What is strange is that linen thread as such is nowhere in cuneiform texts referred to with a word obviously derived from a root *ṭw/my* “to spin” (see note 87).

When we search for other words derived from that root, we find a complex situation. A word *ṭimītu* is attested in Middle Babylonian texts and clearly denotes there a thread made of both wool and goat hair (BE 14 51: 6 f. and 150: 1). This is corroborated by the Neo-Babylonian list of materials for ritual pur

56. For second millennium examples from Ugarit see MRS 7 p. 207 RS 16.187A, if this is not a fragment from a treaty as is ibid. RS 16.259. See also the passages from Ugarit cited note 53.

57. There are in fact two such techniques referred to in the Old Testament, one used by the craftsman called *rōgem* and one by the *hōšep*, the work of the latter apparently held in higher esteem. See the study of Haran cited in note 59, p. 279.

58. For the use of linen (*šeš*) and purple (*argaman*) for a woman's dress, see the unique passage Prov. xxxi 22, which seems to me difficult to relate to the taboo mentioned in note 60. I cannot accept the suggestion of Dietrich and Loretz in BiOr 23 (1966) 133 who connect Hebrew *šeš* with Ugaritic *tš* and explain them both as byssos, not only because there is no reason to suggest that there were two words for byssos in Hebrew, but also because in the Ugaritic passage aduced the word *tš* (note Egyptian *tš* linen) clearly denotes an essential and not a luxury piece of apparel.

59. For a relevant investigation, cf. M. Haran, “The Complex of Ritual Acts Performed Inside the Tabernacle,” Studies in the Bible (Scripta Hierosolymitana 8 [1961]), pp. 272–303, who shows the “sacred” character of this style of textile decoration (*hšp*) which was restricted to the veil, the inner curtains of the tabernacle and the outer garments of the high priest. Only his belt was made by the technique called *rqm* see above, note 57.

60. The Biblical prohibition against mixing wool and linen threads (a practice denoted by the foreign word *ša'aṭnez*) might conceivably go back to a taboo connected with a technology reserved for textiles destined for contact with the sacred, and therefore inadmissible for profane use. See above, notes 55 and 59.

61. The last five lines are difficult: “50 shekels of strong red-purple twine (for *ṭimu* see p. 23) for the goddess Ušur-amassu and the Urukean (Ištar); 1½ minas (of the same) for the figured linen (curtain?) and the ropes on the doors” (see CAD sub *asumittu* and *kabbaru*).

62. The word used is written TÚG.NÍG.LÁM which need not in every context be read *lam(a)huššû*; here it is used simply as a logogram for *lubuštu*, exactly as it is to be read *lubūšu* “clothing-allowance” in MDP 24 332: 7–8 (TÚG.NÍG.LÁM) as is shown by *lu-bu-ši-im* in the parallel passage MDP 24 333: 15. M. Civil refers me, furthermore, to ZA 50 (1952) 66: 43 where he suggests “loincloth” for *túg.níg.lám(.bàn.da)*, a meaning which is supported by the small amounts of wool needed (e.g. AnOr 1 292: 46, 80, TuM NF 1-2 239: 1 and 4, HSS 4 101: 5).

poses BE 8 154: 15, which runs: 1 GÍN *ti-me-tu*₄ *ša* SĠG.ĤI.A *ša* (copy *a*) *par-ra-tu*₄ *ù ša ú-ni-qu*, "one shekel of *timātu*-thread of lamb wool and of kid hair."⁶³ Passages which mention a word *timu* derived from the same root do not contradict this interpretation of *timātu* as a special type of twined yarn. Again, they all come from Uruk; the *timu* is rarely made of linen (GADA *timu* YOS 6 113: 1 and 3), mostly of white wool (*ša piši* YOS 7 193: 29, GCCI 2 105: 5, 108: 3, 121: 14), of blue-purple wool (GCCI 2 108: 5) or red-purple wool (YOS 7 183: 30, GCCI 2 105: 6, 108: 5, 121: 5).

My objection against connecting *timānu* with *timu* (and the instances for *timātu* cited in note 63) is that only the former is imported, and is never provided with any indication as to color or material. The same two characteristics can likewise be observed with respect to the passages which use *ību*, the Assyrian dialect form of *timu*. The letter ABL 347, already twice adduced (see above, pp. 243 and 248), mentions 186 pounds of *ību* GADA (rev. 4) among goods imported from the West,⁶⁴ and so does the badly broken Neo-Assyrian administrative document from Nineveh, ADD 953, where, in col. v 15, 120 minas of *ību* GADA are listed, this time beside GADA *qattunu* "fine linen."

I propose therefore to waive etymological considerations and to rely directly on the textual evidence which seems to me to show the following pattern:

Group A	Group B
GADA <i>timānu</i>	<i>timu</i> of linen or wool (but see note 61)
<i>ību</i> GADA	<i>timātu</i> two-ply yarn made of wool and hair (but see note 63)
Imported in large quantities from the West. No color or material indications.	A special type of yarn made by twining several threads and used for special purposes. Known in Mesopotamia from the second millennium on.

I shall now argue in detail against the apparently obvious interpretation of the materials forming Group A (i.e. GADA *timānu* and *ību* GADA) as a type of fine linen imported from the West into both Assyria and Babylonia. I have four arguments in support of my contention that the determinative GADA, i.e. linen, should be disregarded or interpreted in a different way (see below, p. 251).

1. The finest imported linen is called *būšu*, byssus, in Mesopotamia and even in Syria.

In the second half of the 9th century B.C. we find the first references to fabrics called *būšu*; they come from the land of Suḫi (on the Euphrates between the Baliḫ and Ḥabur rivers) and from Sam'al in Upper

63. A further reference, BE 31 pl. 51 No. 60 ii 6, speaks of a *timātu* made of red wool (SĠG.SA₆) on which stone beads are to be strung to protect its wearer against certain diseases.

64. The letter is quite difficult and obviously written under strain. Here is a translation: "A servant who was badly treated (still) turns to his august master! I am the one who was badly treated. The king my lord has appointed (me before), would that the king my lord might install me again. When I wanted to settle (? copy: *lu-pi-šú*; some form of *epēšu* is expected) my accounts (with them), the bureaucrats made me lose favor with the king my lord! So now (for the first time) since the king my lord installed me, I am (staying) in my house. I am afraid of the palace administration. [I wanted to appear] before the king in order to make promises (but) the king [was not agreeable(?)]. Now [I am desperate(?); still] the king my lord should do as he sees fit. 31 talents of *ību* GADA, 81 talents of red-purple(?) wool, 8 talents of dark purple(?) (wool), 30 talents of alum, ten talents of natron, all together (a shipment of) 158 talents (nearly 10,000 pounds) (I have brought but) let the king my lord inquire (about the payment)! They have not given me from anybody ('s account) even as much as one mina (of silver)!"

The background is clearly commercial. A large delivery of typical "western" import goods had been brought to the Assyrian capital by Marduk-šarra-ušur, but difficulties developed between him and the LÚ A.BA.MEŠ of the palace administration. The name is too common in contemporary letters, legal, administrative and historical texts, to permit meaningful identification of the writer. Note that ABL 993 deals likewise with matters of trade.

Syria. The Assyrian king Shalmaneser III (858-824 B.C.) obtains *bu-ú-ši*(!) as tribute from a certain Marduk-apla-ušur, a ruler of Suhi. It is mentioned immediately before the garments called *lubulti birme u kitê*, discussed above, p. 246. The Phoenician inscription of King Kilamuwa of Y²DY (Sam²al) is more significant; he boasts⁶⁵ that "He who had not (even) seen linen since his youth, in my days he was covered with *bš*." The Old Testament refers likewise to *būš* as a fine quality of linen, while ordinary linen is called *bad*. It knows, moreover, another term for fine linen, *šeš*, which is once described as bought in Egypt (Ezekiel xxvii 7).⁶⁶ The Mesopotamian references (apart from the passage just mentioned and that cited in note 44) are few,⁶⁷ most of them coming from the archives of Nineveh (Kuyundjik). While in ADD 1077: 6 and 1129: 3, both very damaged, the word occurs in rather uncharacteristic contexts,⁶⁸ the already utilized (see note 53) letter of Sennacherib (ABL 568, written before 705 B.C.) lists *būšu* among the tribute from the West.⁶⁹ Beside much silver (and a few silver and gold objects), large amounts of preserved fish⁷⁰ and fine garments are recorded in this document as destined for the queen and officials of the palace. Among the garments, TÚG.GADA and TÚG *sad-din* figure prominently. The former was most likely a linen garment of characteristic shape, and as such needed no further description.⁷¹ The latter appears to be less valuable and is described in two ways: *sad-din būši* (see ADD 1129 cited in note 68) and *sad-din KAL*, probably "made of *būšu*," and "rough(?)." The word *saddinnu* occurs as early as the second millennium in texts originating in Mitanni,⁷² and seems to refer to a piece of apparel of specific shape and function.⁷³

When we turn to the Greek sources for byssos, the problems become rather involved, as illustrated by the length of Olck's article "Byssos" in Pauly-Wissowa Real-Encyclopädie 5 (1897), Sp. 1108-1114. The basic reference from our point of view is the fact that the Rosetta stone⁷⁴ translates by "byssos" what the Egyptian text calls "the king's linen."⁷⁵ This Egyptian designation of a fine type of linen is reflected in the cuneiform letter written by the king of Cyprus and found in Amarna (EA 34) in which he expressly

65. See F. Rosenthal in ANET p. 501, also H. Donner and W. Röllig, Kanaanäische und aramäische Inschriften (Wiesbaden, 1964), no. 24.

66. The rarely mentioned textiles *meši* — traditionally (but hardly correct) silk — and *karpas* are not discussed in this essay, though the connection of the latter (Esther i 6) with the Greek and Latin word for cotton (*carbasus*) is evident.

67. An atypical reference for *būšu* should be mentioned only in footnote. The inscription BBSt. No. 36, p. 127, of Nabopolassar (625-605 B.C.) on a clay box which contained a stone tablet recording an endowment (rather a re-endowment) made by Nabû-apla-iddin (ca. 885-855 B.C.) contains our word in line 16. The divine garments of the (older) stone inscription (v 39-vi 4) are being replaced by Nabopolassar with more up-to-date pieces of apparel, among which is a headband (*mullatu*) made of what is put down as *tabarri KÛ būšu ṭimîtu*. This difficult phrase might mean "of light red-purple (dyed wool) twined with *būšu* (linen) threads," and might thus refer again to the characteristic textile technique mentioned above, p. 247.

68. In ADD 1129: 3 a *saddinnu* garment is said to be made of *bu-su* (sic), and in ADD 1077: 6 the text has 1 *bu-u-zu* TÚG SAG.

69. According to Martin (op. cit., p. 44) the king of Asdod, named Azuri, is mentioned in r. 1.

70. This might well refer to fish pickled or otherwise prepared as a tasty relish and exported from the shores of the Mediterranean as far inland as Assyria.

71. For the interpretation of TÚG.GADA as corresponding to West Semitic *ktn* see Dietrich and Loretz, op. cit., p. 224 f. See, however, note 82 below.

72. For the Amarna inventory listing presents of Tušratta, see EA 22 i 44 (2 *sa-ti-in-nu birmu*); for the texts from Nuzi note the manufacture of a *šimittu sa-ti-in-[ni]* (beside *kušpaḥḫu*) in AASOR 16 1: 27 and passim in this text, a *ḫullanni* garment made of TÚG *za-ti-ni* in JEN 588: 36, both of which speak of a material rather than of a finished product. In HSS 14 247: 31, however, *iltēnūtu sa-di-in-nu-ú ša ta-w[a-r]-[we]*, we have a purple-colored *saddinnu* garment.

73. H. Zimmern, in Akkadische Fremdwörter als Beweis für babylonischen Kultureinfluss (Leipzig, 1917), p. 36, connects this word with the very rare Hebr. *sādin* which thus might be a loan from Hurrian. See also Stamm Namen-gebung, p. 256.

74. See W. A. Crum, A Coptic Dictionary (Oxford, 1939), p. 522. I owe this reference to Professor K. Baer of the Oriental Institute.

75. For the problem involved, I refer here to A. H. Gardiner, who discussed the word and its reading, meaning, etc., in "Two Hieroglyphic Signs and the Egyptian Words for 'Alabaster' and 'Linen,' etc.," Bulletin de l'institut français d'archéologie orientale 30 (Le Caire, 1930), pp. 161-183, especially pp. 171 ff.

asks for GADA.LUGAL, "the king's linen" (line 25).⁷⁶ Whether the Greek term *byssinos* ("byssus-made") always refers to a type of fine linen or, perhaps, also denotes cotton, as late Greek authors seem to suggest, is not our concern. The main reason for discussing *būšu* at length here was to show the existence of a generally accepted Western word denoting fine linen (etymology unknown, but see note 83) which had currency in both Assyria and Babylonia.

2. When linen was actually imported into Mesopotamia it is specifically so described. This is clearly brought out by the Neo-Babylonian text CT 2 2⁷⁷ which speaks of a garment made of *kitū ša URU Mišir* (line 8), "linen from Egypt" that, for its very good quality, is thought to belong to the divine wardrobe. From this document we thus learn that the linen for Babylonian images was of as high a quality as that coming from Egypt — the piece of linen under discussion was actually acquired from a person called "The Egyptian."⁷⁸

3. A foreign word exists in contemporary Neo-Babylonian texts denoting linen fabrics either actually imported or made according to a western technique. This is the expression *kitinnu*.⁷⁹

The Nabopolassar inscription BBSt. No. 36 p. 127: 4 already cited (see above, note 67) has TÚG *šibtu ki-tin-nu*, i.e. a *šibtu*-garment⁸⁰ made of *kitinnu*. The same garment recurs in Oberhuber, Keilschrift-

76. He also asks for (perfumed) oil and linen (line 47), and horses and linen (line 22) as payment for the copper he is supposed to send to Egypt. Linen is also mentioned in letters from Egypt such as RA 31 127: 9 (GADA with the West Semitic gloss *ma-al-ba-ši*) and EA 265: 13 (12 sets of TÚG.GADA, which seems to show that the dress called TÚG.GADA could not have consisted of a single piece).

77. Translation of CT 2 2:

(Names of) the free citizens (of Sippar) in front of whom Bēl-iddannu, the repairer of the (temple) fabrics of Ebabbar, declared in the month Ajaru of the 19th year of Darius (i.e., 503 B.C.) to Guzānu, the chief priest of Sippar, and the (assembled) temple personnel of Šamaš as follows: "Not a shred (*šišti*) (is left) of the one threadbare piece of linen which was given to me for repair work to be made into strips (to be used) to protect the handles of the (ceremonial) bed of the Lady-of-Sippar (*ana mušēzib qātē ša erši ša DN ušerrātu*)."

Guzānu, the chief priest of Sippar, and the temple personnel had (previously) given the following order to Bēl-iddannu, the repairer of fabrics: "Search the storerooms of the members of the temple assembly (LÚ *ki-nar-ti*)!" Bēl-iddannu searched the storerooms and confiscated an undergarment made of Egyptian linen from the storeroom of Balāssu-Gula to show it to Guzānu, the chief priest of Sippar, and to the temple personnel of Šamaš. Guzānu, the chief priest of Sippar, and the personnel of Šamaš asked Bēl-iddannu (on that occasion) as follows: "Is this the (missing) undergarment of [. . .] linen belonging to Šamaš?"

Bēl-iddannu had (previously) obtained a shred of linen (as a sample) from the magazine of the [keepers of the divine wardrobe]; they (the keepers) declared (however) as follows: "None of the linen (garments) of Šamaš is missing from the magazine, (besides) this undergarment did not belong to Šamaš."

[They — i.e. the chief priest and the assembly] (now) asked Balāssu-Gula as follows: "Is this undergarment your property(? copy *ša-KAN*(?)*-mu ši*), since (when, or: from whom) [have you acquired it]?" Balāssu-Gula declared as follows: "I received this undergarment from an Egyptian in the presence of Eribā, son of Mušebši-Marduk, Eriba, son of Nāšir, Šuma-[iddin, . . .], Bēl-apla-iddin (and) Širikti, the oblate of Šamaš, for a payment in flour and dates, this (same) undergarment which Bēl-iddannu has taken from the reed basket (*šad-da qani*) of Balāssu-Gula." (A list of 12 names follows.)

Without going into the details and the background of this interesting document, one can state that a piece of linen apparel belonging to the wardrobe of the god disappeared from the workshop where it had been sent to be cut into small pieces (*šurruṭu*) and utilized thus to the last rag. The official in charge of the repair shop was ordered to search for the garment in the storerooms of the temple personnel (*kinartu* for *kinaštu*) and he discovered a garment made of Egyptian linen in the reed basket of a certain Balāssu-Gula. The latter, however, was able to establish by means of witnesses that he had acquired it legally from an Egyptian two years before. An incident is recorded in lines 12 to 13 in which the investigation of the theft follows another line. It seems that the accused official obtained a statement from the priests in charge of the divine wardrobe that no garment of the god's was missing, and moreover that the sample he had of the lost piece of threadbare (*qalpu*) linen was not of the kind used for garments of Šamaš. This statement was apparently considered reason enough to exculpate him, and so the investigation turned to the owner of the garment made of Egyptian linen. This gives the impression that it was unusual for a member of the temple community to own such a precious imported piece. It seems that an Egyptian living for some reason in Sippar had to part with his fine linen dress under duress, because it was bought by the temple official not for money but for foodstuff.

78. This is not the ancestor of the family (named "The Egyptian") discussed recently by D. J. Wiseman in "Some Egyptians in Babylonia," Iraq 28 (1966), pp. 154–158, especially p. 157 f. See now also M. Dandamayev, "Egyptians in Later Babylonia" in *Drevnij Egipet i Drevn'aja Afrika* (Moscow, 1967), pp. 15–26.

79. See AHw. sub *kidinnā*, CAD sub *kitinnu*.

80. See CAD *šibtu* mng. 3; also above, note 43.

denkmäler . . . zu Florenz No. 165: 24', MĀŠ.ME ša *ki-tin-ni-e*, while in Nbn. 929: 2 (TÚG.ĤI.A *ki-tin-ni-e*), YOS 3 136: 9 and TCL 9 117: 15 (*hušannē ki-tin-ni-e*) other pieces of apparel are said to be made of the same material. Elsewhere, the word denotes not the fabric but the yarn to be woven into a fabric, as is shown in Oberhuber, op. cit. No. 165: 21' with 17 MA.NA *ki-tin-ni-e* TÚG.ĤI.A, and especially Nbn. 879. The latter records that 13 minas of *ki-tin-ni-e* [. . .] were given out together with one mina of *tabarru*-purple wool, obviously to produce another of these garments made of linen with colored wool embroideries or decorations; cf. also Nbn. 460: 1, 4, Camb. 30: 1, 191: 4 and AfO 16 307 No. 2: 2 for the issue of such material. There is still another meaning of the word *kitinnu*. YOS 3 194: 16 and CT 22 35: 40, two Neo-Babylonian letters, contain the phrase *mê qātē u ki-tin-ni-e*, "the hand-water basin and the linen towels (of the goddess Lady-of-Uruk)." The word *kitinnu* would denote therefore, exactly like *kitû*, a yarn and a fabric as well as a finished piece typically made of that fabric (synechdochic use). Whether we have in *kitinnu* an *-innu* formation of *kitû*⁸¹ or a loan from Aram. *ktn*⁸² matters little for the purpose of the present investigation.

4. In the second half of the first millennium, Mesopotamia (i.e. Babylonia proper) seems to have greatly increased its own linen production, which makes it unlikely that much linen was imported at high prices.

Production of flax in agricultural holdings is first reported in the tenancy contracts of the Murašû archives such as BE 9 65: 20 f., 86a: 24 and PBS 1/2 150: 20, and in the text of unknown provenience Moldenke 2 13: 1, 3, where large quantities of flax are delivered by a gardener. This information must be combined with the remark in Strabo's Geography XVI 1,7: "Borsippa . . . manufactures linen in great called *qātu*) mentioned in the linen weaver's account Nbn. 164. Note also that the weaver of linen fabrics (*išpar kitû*, see CAD s.v.) appears in cuneiform texts only beginning with the Neo-Babylonian period.

The four arguments presented here do not constitute direct proof, but they all point towards the same state of affairs: there seems to be no economic motivation for importing fine linen into Assyria and Babylonia from as far as Syria and Egypt, apart from the very rare fine byssus which for some reason⁸³ had prestige value. I must now attempt to offer an alternative explanation, since I have tried, at length, to disprove the interpretation of *ṭibu* and *ṭumānu* as linen, their determination by the sign GADA notwithstanding.

I shall propose here two candidates; both are fibers expensive enough to warrant a long transport overland; both have a natural color and come in a physical form that warrants in some way the designation "twine" or the like, and neither of them would be incompatible with the use of the determinative GADA.

The first candidate is cotton,⁸⁴ i.e. *Gossypium herbaceum*. Not only does Sennacherib speak (as was shown above, p. 245) of the "wool" that grows on trees and is used for making fabrics, but Herodotus (iii 107, vii 65) uses this same figure of speech to refer to cotton (Latin *Linea arborea*). The Greek tells us further (iii 47) that cotton was grown in Egypt under Pharaoh Amasis (569-525 B.C.) who sent garments made partly of this new and costly material to Greece, in roughly the period during which the documents using the term *ṭumānu* were written. Even nearer to Babylon (see also note 66), cotton was grown on the island of Tylos, the Mesopotamian Telmun in the Persian Gulf, as we know from Theophrastus,

81. Such as *qutru-qutrinnu*, *kuršu-kuršinnu*, etc.

82. The Phoenician evidence occurs in the passage referred to above, note 65. It might be appropriate to protest here against the ever-repeated assertion that the West Semitic word for linen *ktn* is to be connected with the designation of a specific garment called *kutānu* in the OA texts from Asia Minor. There is hardly any trace of the use of linen in the Cappadocian texts, and no suggestion that the *kutānu* is ever made of anything but wool, just like the *šubātu*. Nor is there any cogent reason to assume that *kutānu* is to be read *qutānu* and should therefore mean "thin garment," any more than there is to derive the meaning of *šubātu* from the verb *šabātu*.

83. So far the word *būšu* is etymologically unconnected, and it remains uncertain whether it is at all of Semitic origin, although byssos in Greek (see Heinrich Levy, *Die semitischen Fremdwörter im Griechischen* [Berlin, 1895], p. 125 f.) is an Eastern loan. I would like to propose here a possible relationship between *būšu* and the word for "wick," *būšinnu* (see CAD s.v. discussion section), without suggesting an etymology, in view of the possibility that wicks are by nature made of fluffy plant fibers, so that the fineness and fluffiness of the material would form the link between the two words.

84. The ultimate etymological relation between West Sem. *ktn*., Akk. *kutānu* and Arabic *quṭ(u)n*, cotton, I leave aside as extraneous to the problem at hand.

the successor of Aristotle; in his famous "Enquiry into Plants" (iv 7; 7,8) he speaks of cotton as well as of silk. I think therefore that an argument can be made for interpreting either *ṭibu* or *ṭumānu* as cotton grown in the fertile soil of Egypt and imported by Phoenician or Syrian middlemen into Mesopotamia. Its naturally white color, its strong and easily-plied yarn must have made cotton very attractive to the Mesopotamians. It was apparently cheaper than *būšu*-linen; at any rate it was imported in large quantities and as a raw material, as distinct from *būšu*, which seems to have come into Mesopotamia mainly in fabrics.

My second candidate is silk — not the silk obtained from the silkworm (*Phalaena bombyx mori*) which feeds on the leaves of the mulberry tree, imported from China only a few centuries later, but wild silk produced by a silkworm native to the Near East. This is the famous "Assyrian silkworm" of which Pliny speaks (Natural History XI xxv–xxvi, Loeb edition, H. Rackham) called nowadays *Pachypasa otus Drury*. Living on trees (cypress, oak, pistachio) native to Upper Syria and the adjacent mountain regions, it produces cocoons⁸⁵ which were collected after the insects had left them, then carded, and spun into a nubby thread. The problems connected with this "wild" silk have been thoroughly discussed by Gisela M. A. Richter, "Silk in Greece," AJA 33 (1929), pp. 27–33, especially in relation to the famous "Coan Garments" (*vestis Coa*, also *vestis Bombycina*), and by Florence E. Day, "Aristotle: *Tā bombykia*," in Festschrift Levi della Vida 1 (Rome, 1956) with respect to Aristotle's knowledge of the Chinese way of preserving intact the cocoon of the Eastern silkworm.

Since these matters are rather outside my field of interest, I will restrict myself here to a remark on the Greek word for the cocoon of the silkworm, *bombykion*, which has been connected (see the cited paper of Miss Day, p. 207) with the north Syrian city Bambyke (modern Membidj, about 25 miles due south of Carchemish). This city, called Nappigi in an inscription of Shalmaneser III (3 R 8 ii 35), is also mentioned as a stop in the unfortunately quite fragmentary Neo-Assyrian itinerary ADD 1096 r. 2, which describes station by station (with mileage indications) the road from Nineveh to the West. It thus seems that Nappigi (on the road to Aleppo — see below note 92) was of some importance, and might have been a commercial center for the collection and processing of the cocoons of the "Assyrian silkworm." One must not forget that this was hardly a new art in the second half of the first millennium B.C., since utilization of wild fauna as a rule goes back to remote origins. Anyhow, there can be no doubt that the nubby yarn spun out of the torn silk furnished by these pierced cocoons was actually used in the first millennium; we do have a Ptolemaic wool tunic found in Egypt⁸⁶ with a weft made of Tussah silk, i.e. silk produced by native non-domesticated Near Eastern silkworms. As the trees on which the "Assyrian Silkworm" lived (see above, p. 252) were hardly native to Egypt, this material must have been brought in from the North, probably from Syria.

One question still remains: if we have a choice of two fibers (cotton and silk), on what possible grounds could one or the other of the two Akkadian words discussed, *ṭibu* and *ṭumānu*, be assigned to them? One consideration could perhaps suggest a decision which, being purely philological, is but of limited value. The noun pattern evident in *ṭibu* and *ṭumānu* respectively, derived from the same "root,"⁸⁷ intimates that the first refers to a "normal" product of the verb *ṭam/wû* "to twist," and the second to an "abnormal" shape of the thread or twine. Hence *ṭimu* probably denotes the smooth and tightly twined cotton thread, and *ṭumānu* the nubby and irregular thread made of the carded filament of the cocoon of the Assyrian silkworm. *Non liquet*.

I would not like to terminate this discussion of silk without considering the possibility that even in the period discussed in this essay real silk had somehow found its way into the ancient Near East, as it is known to have done two or three centuries later. Silk in rolls was exported from China westward from

85. The Assyrians knew this habit of certain insects as can be seen from the passage in Wiseman Treaties 579 (cited CAD sub *burti šamḫat*), "just as the caterpillar does not look back(?) and does not return to its cocoon (*biškānu*)."

86. See A. Lucas, op. cit., p. 149, note 1.

87. The verb does not refer, in fact, to spinning (i.e. to the conversion of a strip of fluffy roving into a thread), but rather to the twining of two threads of different materials — typically wool and hair (see above, p. 247 f.), wools of different colors, wool (or hair) and animal sinews or plant fiber (see e.g. CAD sub *ašlu* B usage a-1') to produce a strand, rope or the like (in Akk. *ṭurru*, *riksu*, *qû*, etc.). See CAD *išpartu* usage b. See also Zimmern Fremdwörter p. 28.

the middle of the second millennium B.C. on, mainly in exchange for the horses needed by the Chinese. In the first millennium (beginning with Tukulti-Ninurta II, 890-884 B.C.) the rising military importance of cavalry made it imperative for the Assyrians to get more and better horses from the primitive tribesmen who raised these animals anywhere between the Zagros and East Turkistan. Since the Chinese, too, had to trade with these tribes to obtain horses, the silk with which the Chinese paid could, theoretically at least, have reached the ancient Near East. After all, the mines of Badakhshan in Eastern Afghanistan produced the precious lapis lazuli that unfailingly found its way across Iran and Urartu into Mesopotamia, drawn by the high price it fetched in the West. Official trade relations between Parthian kings and the Chinese empire, one must remember, were established in 128 B.C., and an extended period of increasing commercial contacts prior to that date⁸⁸ may well be assumed.

IV. *Conclusions*

At the end of this lengthy essay one more problem remains to be considered, that of the carriers of the trade on the overland routes we have been discussing. In view of the fact that this trade involved the exportation of purple-dyed wool and fabrics, the merchants of Tyre, the "Merchant city," that "Mart of Nations," (Is. xxiii 3 and 11), "famous . . . in purple blue and fine linen (*būš*) and in crimson" (2 Chron. ii 14), have to be considered quite seriously. That city on the shore of the sea, which furnished the murex shells needed for the manufacture of a variety of purple dye,⁸⁹ always had a monopoly of this export trade.⁹⁰ Already in my *Ancient Mesopotamia*, p. 94 and note 18, I have suggested that Phoenicians had been involved in the international trade of the period. I pointed out that the chief-merchant (GAL DAM. KĀR) of Nebuchadnezzar II (604-562 B.C.) had the name Ḫanūnu, a well-known Akkadian transcription of the typically Phoenician name Hanno⁹¹ which can most likely be taken as an indication that trade with Phoenicia was either in the hands of the natives of Tyre or controlled by them in some way. It combined the delivery of typically Phoenician products with the procurement of essential raw materials from other countries, such as Egypt and certain places in Asia Minor, whereby the Phoenicians acted in their well-known function as intermediaries, as middlemen. If these assumptions should prove correct, a new dimension to Phoenician trade would have to be recognized: to the West we would have the sea trade originating from the cities on the Phoenician coast (first Tyre and then Sidon) and their far-flung colonies, which would constitute in this new light only one part of the commercial empire of Tyre. To it could then be added the eastward extension we have been able to discover in Babylonia proper, on the basis of the two documents investigated in this essay.⁹²

Further illustration of Phoenician penetration into Mesopotamia is furnished by a Phoenician conjuration on a stone tablet found in Arslan Taš (Ḫadatu in Upper Mesopotamia, about 15 miles due East

88. Attention should be drawn to two curious statements of C. F. Lehmann-Haupt, one in his contribution "Bombyx" in *Innsbrucker Festschrift für O. Redlich* (Innsbruck, 1928), pp. 409-430, and one in *Actes du XVIII Congrès International des Orientalistes* (Leiden, 1931), on pp. 57-59 concerning a roll of silk allegedly from the early first millennium B.C., found by him in Armenia and kept in the Vorderasiatisches Museum in Berlin since 1909.

89. For a somewhat popular article on the techniques involved, see L. B. Jensen, "Royal Purple of Tyre," *JNES* 22 (1963), pp. 104-118.

90. The Ras Shamra tablets published by F. Thureau-Dangin, "Un comptoir de laine pourpre à Ugarit d'après une tablette de Ras-Shamra," in *Syria* 15 (1934), are important solely for the internal organization of purple industry in Ugarit and not for the foreign trade of that city.

91. Note the name of the king of Gaza, wr. *Ḫa-a-nu-nu*, in Lie Sargon line 56 and passim in the inscriptions of Sargon II (721-705 B.C.). Persons with this name appear quite frequently in the Nippur texts of the late Persian period (Muraššu-archives) but also in NA tablets; note especially the early reference Tell Halaf 53: 5 and, from Nineveh, the high-ranking officer *Ḫa-nu-nu* ADD 857 ii 9; also passim in Neo-Babylonian texts (only once in Uruk as the father of a person with an Akkadian name: YOS 6 132: 17).

92. Although it has been assumed here (see p. 239) that the Euphrates was used for the transportation of metals and wine casks, the possibility should be considered that the old (second millennium) overland route from Babylonia proper across Upper Mesopotamia to the Euphrates (cf. A. Goetze, "An Old Babylonian Itinerary," *JCS* 7 (1953), pp. 51-72, and W. W. Hallo, "The Road to Emar," *JCS* 18 (1964), pp. 57-88) which was eventually replaced by the royal road of the Achemenids (from Seleucia-Ctesiphon to Edessa and Antioch, crossing the Euphrates at Zeugma or Samosata), was used by these merchants in our period, the Chaldean.

from Carchemish)⁹³ and another from Ur.⁹⁴ It thus seems that the conquest of Tyre by Nebuchadnezzar II in 574 B.C. did not at all shake the network of sea lanes and trade routes that held the world of our period together from the Pillars of Hercules (and beyond) to Uruk and, most probably, beyond. This newly discovered area of commercial activity, Tyre, has left us only a few traces in the archeological evidence from the regions covered, and even less direct written documentation. Still, it might be hoped that a link or a series of links will one day become discernible between the old Phoenician (Eastern) trade routes and those which eventually connected, through the caravan cities,⁹⁵ the powers around the Mediterranean with India, Central Asia and — China.

93. See Donner and Röllig, *op. cit.* No. 27.

94. See Donner and Röllig, *op. cit.* No. 27; see also J. A. Brinkman, *Or. NS* 24 (1965), p. 258 note 1 sub b.

95. Cf. M. Rostovtzeff, *Caravan Cities* (Oxford, 1932), especially the chapter "The Caravan Trade: Historical Survey."